What is claimed is:

1. A method of manufacturing a thermal interface device, comprising:

placing a heat conducting structure on a first metal containing layer;

attaching the first metal containing layer to the heat conducting structure; and

attaching the first metal containing layer to a component surface;

wherein, at least one attaching operation of the first metal containing layer includes plastic deformation of the first metal containing layer into surface features along a deforming interface at a temperature lower than a melting temperature of the first metal containing layer.

2. The method of claim 1, further including plastic deformation of the first metal containing layer at a temperature higher than ambient temperatures.

3. The method of claim 1, wherein placing the heat conducting structure on the first metal containing layer includes placing a heat conducting structure that covers a fraction of a side of the first metal containing layer.

4. The method of claim 1, wherein attaching the first metal containing layer to the heat conducting structure includes attaching an indium solder layer to the heat conducting structure.

5. The method of claim 1, further including attaching a second metal containing layer to the heat conducting structure substantially opposite the first metal containing layer.

6. The method of claim 5, wherein attaching the second metal containing layer to the heat conducting structure includes attaching an indium solder layer to the heat conducting structure.

7. The method of claim 5, further including selecting a different material for the first metal containing layer and the second metal containing layer.

8. The method of claim 1, wherein heat placing a heat conducting structure on a first metal containing layer includes placing a diamond film on a first metal containing layer.

9. The method of claim 1, wherein heat placing a heat conducting structure on a first metal containing layer includes placing a heat conducting structure chosen from a group consisting of woven carbon fibers and pyrolized carbon.

10. The method of claim 1, wherein attaching the first metal containing layer to a component surface includes attaching the first metal containing layer to an integrated heat spreader surface.

11. The method of claim 1, wherein attaching the first metal containing layer to a component surface includes attaching the first metal containing layer to a integrated circuit chip surface.

12. A processor assembly, comprising:

a processor chip attached to a substrate;

a thermal interface device coupled to a surface of the processor chip, including:

a first metal containing layer;

a second metal containing layer stacked over the first metal containing layer with a first side attached to the surface of the processor chip;

a substantially planar carbon structure located between at least a portion of the first metal containing layer and the second metal containing layer; and

an integrated circuit package cover coupled to the first metal layer, the integrated circuit package cover substantially enclosing the processor chip and the thermal interface device within a volume on the substrate.

13. The processor assembly of claim 12, wherein the substantially planar carbon structure completely separates the first metal containing layer and the second metal containing layer.

14. The processor assembly of claim 12, wherein the substantially planar carbon structure includes a diamond film.

14. The processor assembly of claim 12, wherein the substantially planar carbon structure is chosen from a group consisting of woven carbon fibers and pyrolized carbon.

15. The processor assembly of claim 12, wherein the first metal containing layer includes solder.

16. The processor assembly of claim 12, wherein the second metal containing layer includes solder.

17. The processor assembly of claim 12, wherein the first metal containing layer and the second metal containing layer include substantially pure indium (In).

18. The processor assembly of claim 12, wherein the first metal containing layer is different from the second metal containing layer.

19. The processor assembly of claim 12, further including a heat sink coupled to the integrated circuit package cover.

20. The processor assembly of claim 12, wherein at least one metal containing layer includes mechanical bond features at an interface.

21. An information handling system, comprising:

a non-volatile memory;

a system bus coupled to the non-volatile memory;

a processor chip assembly coupled the system bus, the processor chip assembly including:

a processor chip attached to a substrate;

a thermal interface device coupled to a surface of the processor chip, including:

a first metal containing layer;

a second metal containing layer stacked over the first metal containing layer with a first side attached to the surface of the processor chip;

a substantially planar carbon structure located between at least a portion of the first metal containing layer and the second metal containing layer; and

an integrated heat spreader coupled to the first metal containing layer.

22. The information handling system of claim 21, wherein the first side of the second metal containing layer is attached to a backside of a processor chip in flip-chip orientation.

23. The information handling system of claim 21, wherein the non-volatile memory includes a flash memory.

24. The information handling system of claim 21, wherein the substantially planar carbon structure includes a diamond film.

25. The information handling system of claim 21, wherein the first metal containing layer and the second metal containing layer include substantially pure indium (In) solder.

26. The information handling system of claim 21, wherein at least one metal containing layer includes mechanical bond features at an interface.